

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Before the Board of Patent Appeals and Interferences

In re Patent Application of

Atty Dkt. 540-190

HANMER

C# M#

Serial No. 09/517,089

TC/A.U.: 3721

Filed: March 6, 2000

Examiner: S. Tawfik

Date: May 24, 2004

Title: VACUUM PACKAGING OF ARTICLES



AFI 3721 1/2

**Mail Stop Appeal Brief - Patents**

Commissioner for Patents

P.O. Box 1450

Alexandria, VA 22313-1450

Sir:

☐ **Correspondence Address Indication Form Attached.**

☐ **NOTICE OF APPEAL**

Applicant hereby **appeals** to the Board of Patent Appeals and Interferences from the last decision of the Examiner. (\$ 330.00 )

\$

☒ An appeal **BRIEF** is attached in triplicate in the pending appeal of the above-identified application (\$ 330.00)

\$ 330.00

☐ Credit for fees paid in prior appeal without decision on merits

-\$ ( )

☐ A reply brief is attached in triplicate under Rule 193(b)

(no fee)

☐ Petition is hereby made to extend the current due date so as to cover the filing date of this paper and attachment(s) (\$110.00/1 month; \$420.00/2 months; \$950.00/3 months; \$1480.00/4 months)

\$

**SUBTOTAL** \$ 330.00

☐ Applicant claims "Small entity" status, enter 1/2 of subtotal and subtract

-\$ ( )

☐ "Small entity" statement attached.

**SUBTOTAL** \$ 330.00

Less month extension previously paid on

-\$ ( 0.00)

**TOTAL FEE ENCLOSED** \$ 330.00

Any future submission requiring an extension of time is hereby stated to include a petition for such time extension. The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith (or with any paper hereafter filed in this application by this firm) to our **Account No. 14-1140**. A duplicate copy of this sheet is attached.

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NIXON & VANDERHYE P.C.  
By Atty: Stanley C. Spooner, Reg. No. 27,393

Signature: \_\_\_\_\_



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In re Patent Application of

HANMER

Serial No. 09/517,089

Filed: March 6, 2000

For: VACUUM PACKAGING OF ARTICLES

Atty. Ref.: 540-190

Group: 3721

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**APPEAL BRIEF**

On Appeal From Group Art Unit 3721

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**APPEAL BRIEF**

Sir:

**I. REAL PARTY IN INTEREST**

The real party in interest in the above-identified appeal is BAE SYSTEMS plc by virtue of a name change document from the assignor, British Aerospace Public Limited Company, recorded October 12, 2000, at Reel 11195, Frame 65 and an Assignment from the inventor to British Aerospace Public Limited Company recorded March 6, 2000 at Reel 10631, Frame 472.

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## **II. RELATED APPEALS AND INTERFERENCES**

There are believed to be no related appeals or interferences with respect to the present application and appeal.

## **III. STATUS OF CLAIMS**

Claims 6-18 stand rejected in the outstanding Final Rejection, with claims 1-5 being withdrawn from consideration.

## **IV. STATUS OF AMENDMENTS**

No amendments after receipt of the Final Official Action have been submitted.

## **V. SUMMARY OF THE INVENTION**

The present invention relates to a method and apparatus for vacuum packaging of articles, and in particular the vacuum packaging of components for use in various assemblies.

As discussed in the background of appellant's specification, it is known to vacuum package articles, and often they are packaged between a thin transparent plastic film and a thin cardboard backing part. For heavier articles, it is traditional to pack such components into boxes, cases or crates. However, recently it has been attempted to vacuum package such heavier articles in a manner similar to

those of light articles, i.e., onto a heavier weight cardboard or other planar surface and use a heavier plastic film.

The attempts to vacuum package heavier articles failed in that the machines could not generate enough suction to allow a thick backing plate to be positioned with the component sandwiched between the plastic and the backing plate. Additional difficulties were obtained when adhesive was applied to the transparent plastic film in that it stuck to the heavier product, making opening of such vacuum packages somewhat problematic and requiring cleaning of the article.

Appellant found that by using a significantly heavier backing board (at least 2 mm in thickness), the selected location of adhesive on this thicker backing board, that an effective packaging system could be provided. Appellant also found it extremely helpful to apply the bonding agent not on the plastic film covering the article, but rather to the backing board itself, but not in a region adjacent to and extending around the area occupied by the article. This facilitated removal of the article by merely cutting the plastic film in the area around the article in which there is no bonding agent, thereby completely releasing the film and the article.

Appellant realized the benefits of a method of packaging an article comprising the following steps: providing at least one recess in a backing board, applying a bonding agent to the backing board "not in a region adjacent to and extending around an area to be occupied by said at least one article." The article is positioned on the backing board, the film is placed over the article and the vacuum

packaging machine is used to remove air from between the film and the backing board, thereby pulling the film down onto the adhesive on the backing board. Appellant found that this method provided proper mounting of such vacuum packaged products and at the same time simplified their removal from the backing board when needed.

Thus, the presently claimed invention is characterized by a method for vacuum packaging of an article comprising the providing of **“at least one recess in a backing board,”** **“applying a bonding agent to the backing board but not in a region adjacent to and extending around an area to be occupied by said at least one article,”** locating an article on the backing board, placing a film over the article and vacuum packaging the article between the backing board and the film, where **“the thickness of the backing board is at least 2 mm.”**

## **VI. ISSUES**

Whether claims 6-18 are obvious under 35 USC §103 over Goodman (U.S. Patent 3,380,583) in view of Forman (U.S. Patent 3,313,084).

## **VII. GROUPING OF CLAIMS**

The rejected claims stand or fall together based upon the allowability of independent claim 6 as described in the argument portion of this Appeal Brief.

## **VIII. ARGUMENT**

### **1. Discussion of the References**

**Goodman (U.S. Patent 3,380,583)** teaches the well-known prior art method of vacuum packaging an article to a backing board. However, the Examiner admits that “Goodman does not disclose that applying a bonding agent to the backing board but not in a region adjacent to and extending around an area to be occupied by the at least one article” [sic] (page 2 of the Final Rejection).

In fact, Goodman at column 8, lines 36-47 describes that heat seal coatings could be applied to the backing boards, but that he actually prefers not to use such coatings. In actuality, Goodman teaches that it is better to use the plastic film materials which facilitate adhesion to the backing boards. This preference of Goodman’s is precisely one of the problems solved by the present invention, i.e., the thin film plastic sticking to the article to be protected making it difficult to remove the article from its plastic container after vacuum forming.

Thus, Goodman specifically suggests not to apply adhesive to the backing board and rather suggests that the adhesive should be applied to the plastic film material. Also, while the Examiner alleges that the minimum thickness of the backing board being 2 mm is disclosed in Figures 1-3, appellant can find no indication in the Goodman figures of any backing board thickness designation.



**Forman (U.S. Patent 3,313,084)** is cited by the Examiner as teaching the application of a bonding agent via a spray gun to a backing board “but not in a region adjacent to and extending around an area to be occupied by the at least one article.” (Page 2, Final Rejection). The Examiner apparently misapprehends the teaching in the Forman reference, as it specifically states that “the coating is preferably applied by a spray gun or air brush 20 which permits relative movement between the nozzle and the device 10, whereby the exposed surfaces may be sprayed at different angles.” (Column 2, lines 36-42).

It appears that the Examiner believes that when Forman sprays at a low angle such as shown in Figure 2, that the far side of the elements will have an area adjacent to them which are not coated with the adhesive spray. However, in the aforementioned quoted paragraph from Forman, he specifically teaches relative movement between the nozzle and the device “whereby the exposed surfaces may be sprayed at different angles.” Presumably, this then teaches one of ordinary skill in the art to move the spray around so that it is angled from the right as shown in Figure 2 and also from the left of that same figure. This will ensure that “all exposed areas, including the surfaces of the electronic components 12, are covered.” (Column 2, lines 36-38).

Thus, Forman discloses not only coating the components themselves, but also all of the backing board. He in fact clearly teaches away from applying the bonding agent to the backing board, but not applying the bonding agent in an area

around the articles to be occupied. In fact, Forman teaches directly away from this method step.

## **2. Discussion of the Rejections**

Claims 6-18 stand rejected under 35 USC §103 as unpatentable over Goodman in view of Forman. To the extent the Final Rejection is understood, he apparently believes Goodman teaches all method steps except for the bonding agent applying step. However, the Examiner has not pointed out where there is any backing board having a thickness of at least 2 mm. The Examiner appears to be under the impression that Forman teaches the method step of applying a bonding agent but not in a region extending to and around the area occupied by the article. Again, how or where the Examiner believes this to be disclosed in Forman is not apparent to the appellant.

## **3. The Errors in the Final Rejection**

There are at least four significant errors in the Final Rejection and they are summarized as follows:

- (a) No teaching of a backing board having a thickness of at least 2 mm;
- (b) No prior art teaches applying the bonding agent directly to the backing board and not in a region adjacent to and extending around an area to be occupied by said at least one article;

(c) No motivation disclosed by the Examiner for combining the cited references; and

(d) In fact, both references would lead one of ordinary skill in the art away from the claimed invention.

**(a) No teaching of a backing board having a thickness of at least 2 mm**

As noted above, appellant's independent claim 6 and all claims dependent thereon require that the thickness of the backing board be "at least 2 mm." The Examiner has not identified how or where any prior art reference suggests such a thick backing board. In fact, the cited prior art all deal with the old thin cardboard backing plates which are admitted to be prior art and were in the background of the invention portion of the present application and which cannot support heavier articles as is the object of the present invention.

Accordingly, the method step of "creating at least one recess in a backing board" having the claimed thickness is not disclosed in either cited prior art reference.

**(b) No prior art teaches applying the bonding agent directly to the backing board and not in a region adjacent to and extending around an area to be occupied by said at least one article**

As noted above, Goodman clearly teaches the preference of applying the adhesive to the plastic film material so as to stick the material both to the article

and the backing board. There is no disclosure of applying the adhesive directly to the backing board and not in a region adjacent to and extending around an area to be occupied by the article.

Moreover, in the Forman reference, it specifically teaches that all exposed areas of the backing board are to be covered with the adhesive material or the plastic film when sprayed onto the backing board. Accordingly, neither prior art reference teaches the claimed method step of “applying a bonding agent to the backing board but not in a region adjacent to and extending around an area to be occupied by said at least one article.”

Thus, no cited reference teaches the claimed “applying a bonding agent” step recited in appellant’s independent claim 6. As a result, because this claim limitation is not taught in any prior art reference, the Patent Office has failed to establish a *prima facie* case of obviousness or to meet the Patent Office burden in proving a case of obviousness.

**(c) No motivation disclosed by the Examiner for combining the cited references**

The Patent Office burden in establishing a *prima facie* case of obviousness also includes providing some motivation or reason for combining the references. In this instance, the Examiner has ignored any requirement of providing a motivation or reason for picking and choosing method steps from the Goodman

and Forman references and has clearly failed to support the rejection under 35 USC §103.

The Court of Appeals for the Federal Circuit has held in the case of *In re Fine*, 5 USPQ2d 1596, 1598 (Fed. Cir. 1988), that “the PTO has the burden under §103 to establish a *prima facie* case of obviousness.” The Court went on to say that the PTO “can satisfy this burden only by showing some objective teaching in the prior art . . . .” The Examiner has shown no objective teaching in either Goodman or Forman which discloses the claimed at least 2 mm thick backing plate or the specific bonding agent application step.

Accordingly, the Patent Office has failed to meet its burden of proof in support of the obviousness rejection.

**(d) In fact, both references would lead one of ordinary skill in the art away from the claimed invention**

As noted above, both the Goodman and Forman references teach away from appellant’s specific “applying a bonding agent” step, in that Goodman suggests that the bonding agent should be applied to the plastic film, rather than the backing board, and that Forman teaches that the bonding agent (the plastic film itself) should be sprayed on all “exposed areas.”

Thus, both prior art references suggest a method step which is decidedly different from appellant’s claimed “applying a bonding agent to the backing board but not in a region adjacent to and extending around an area to be occupied by said

at least one article.” As the Court noted in *In re Fine*, it is “error to find obviousness where references ‘diverge from and teach away from the invention at hand.’” As a result, there is simply no basis for the allegation of obviousness contained in the Final Rejection.

### **IX. CONCLUSION**

Appellant has pointed out in the response to the previous Official Action filed November 10, 2003 and in the above Appeal Brief that neither the Goodman nor Forman references disclose the details of the backing board thickness or the bonding agent application step, both of which are clearly recited in appellant’s independent claim 6 and all claims dependent thereon. Additionally, the Patent Office has failed to meet the requirement of establishing some motivation for combining the two cited references. It also appears that the Examiner has ignored the fact that the two cited references actually would lead one of ordinary skill in the art away from appellant’s claimed invention.

Thus, and in view of the above, the rejection of claims 6-18 over the cited prior art is clearly in error and reversal thereof by this Honorable Board is respectfully requested.

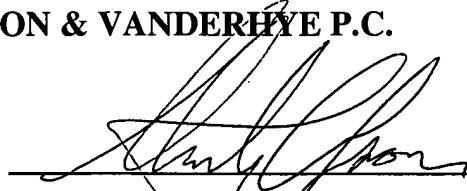
HANMER

Serial No. 09/517,089

Respectfully submitted,

**NIXON & VANDERHYTE P.C.**

By: \_\_\_\_\_

A handwritten signature in black ink, appearing to read 'Stanley C. Spooner', is written over a horizontal line.

Stanley C. Spooner  
Reg. No. 27,393

SCS:kmm

Enclosures

Appendix A - Claims on Appeal



## APPENDIX A

### Claims on Appeal

6. A method for the vacuum packaging of at least one article including at least the steps of:

creating at least one recess in a backing board;  
applying a bonding agent to the backing board but not in a region adjacent to and extending around an area to be occupied by said at least one article;  
positioning at least one article on the backing board in said area;  
placing a film substantially over the at least one article; and  
using a vacuum packaging machine to substantially package the at least one article, the at least one article being situated between the backing board and the film, wherein the thickness of the backing board is at least 2mm.

7. A method in Claim 6, wherein the bonding agent is air dried before the film is bonded to the backing board.

8. A method as claimed in Claim 6, comprising heating the film to cause the film to bond with the backing board.

9. A method as claimed in Claim 6, comprising heating the film and applying suction to a face of the backing board opposite the article(s), substantially simultaneously



so that the bonding agent causes the film to bond with the backing board around the or each article to substantially seal in the or each article.

10. A method as claimed in Claim 6, wherein the step of preventing the film from bonding with the backing board is achieved by applying the bonding agent to only part of the surface of the backing board.

11. A method as claimed in Claim 10, wherein the bonding agent is not applied to a region where an article is to be positioned, said region being greater than a corresponding cross section of the article.

12. A method as claimed in Claim 6, wherein the step of preventing the film from bonding with the backing board is achieved by masking the bonding agent in those regions where the film is not to bond with the backing board.

13. A method as claimed in Claim 6, comprising applying an ink to the backing board.

14. A method as claimed in Claim 6, wherein ink is applied to the surface of the backing board to which bonding agent has been applied, the bonding agent having been allowed to dry before the ink is applied, the ink being applied to the areas of the backing board on which the or each article is intended to be placed.

15. A method as claimed in Claim 14, wherein the ink is applied to the backing board by printing means so as to provide the backing board with the shape of the or each

article superimposed in ink thereupon, the or each superimposed ink shape being greater in area than a corresponding cross-section of the associated article.

16. A method as claimed in Claim 15, wherein digital photography is used in the printing of the shape(s) on the backing board.

17. A method as claimed in Claim 6, wherein the recesses are created on the backing board by punching holes at least part way thereinto.

18. A method as claimed in Claim 6, wherein the recesses are created before the application of the bonding agent.